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ABSTRACT

Guidelines for teaching about three-dimensional art in elementary through upper grades provide teachers with an understanding of skill development and basic concepts at each grade level, as well as many specific teaching ideas. Observations on creative expression, approaches to teaching art, and developmental levels in three-dimensional art are followed by comments on discovering design, form and space, color, texture, and creative patterns. Processes, materials and equipment, teaching hints, and evaluation suggestions are included for working in three dimensions with the following: assemblage, puppets and marionettes, mobiles and stabiles, carving, sand cast, paper, wood, salt dough, paper laminating, clay modeling, basket weaving, and cloth weaving. A bibliography, list of art books for children, and an index of related audiovisual materials conclude the guide. (Author/KSH)

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ART GUIDE

let's create a form

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ASSOCIATION FOR CHILDHOOD EDUCATION INTERNATIONAL

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Children's art work submitted through their teachers in the schools of San Diego County

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FOREWORD

Let's Make a Picture and Let's Create a Form are published as bulletins of the Association for Childhood Education International through the generosity of the Department of Education, San Diego County, California. They are offered to the membership in response to many requests from teachers who subscribe to the official position of ACEI that the arts are basics in the education of children.

Requests for the Publications Committee to help with art education guidelines came mainly from teachers who deplore methods which require correction and evaluation of all the art work done by children, but who are equally unhappy with procedures which permit children to do whatever they want to do as art. These teachers wanted professional help which would prepare them to do a better job of providing the guidance and encouragement children need in order to mature their powers of pouring out ideas and feelings through art.

During a meeting of the Publications Committee at the ACEI Annual Study Conference held in San Diego in the spring of 1968, attention was directed to Let's Make a Picture and Let's Create a Form. These art guides had been developed in San Diego County over a period of several years through the cooperative efforts of teachers and administrators who felt the same concerns which were being expressed to the Publications Committee by Association members. A request to reproduce the guides and make them available as ACEI bulletins was granted by the Department of Education of San Diego County.

The Association for Childhood Education International is deeply indebted to Dr. Cecil D. Hardesty and to all the personnel in San Diego County who combined their talents and efforts in producing the original guides. Special appreciation is extended to Mrs. Ibby Hallam Bowerfind for arranging for the reproduction of the materials and for her outstanding leadership in art education devoted to the creative use of the minds and hands of all children.

ROACH VAN ALLEN
Chairman, 1967-69
ACEI Publications Committee

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WITH MY OWN HANDS

With my own hands I build in space
A form with simple balanced grace;
To add another part with care
Will send it higher in the air.

With my own hands I can do more,
Three full dimensions to explore—
Three paths to walk along and choose
The shapes and shades that I will use.

—Vivian C. Longworth

CREATIVE EXPRESSION THROUGH ART

All children need the opportunity to express themselves through art in its various forms. The teacher who encourages this expression sees each child in the class as an individual who achieves satisfaction in art as he moves at his own rate. At the same time, the teacher is aware that there are patterns of development which most children follow. Within these patterns variations occur, so that some children stay in one stage of development longer than others.

To insure continuity in the child's development in art, the teacher provides opportunity for varied experiences, making the school day rich with visual, tactual, and auditory experiences that help extend the child's perceptual field. Such experiences may be real or imagined, oriented externally or personally. When the child's day is thus filled with interesting events, there is increased possibility that his experiences will come forth in all forms of communication, including a variety of art media.

As the child matures, he becomes more and more capable of learning the skills he needs in order to express himself satisfactorily in the different art media. The teacher must be sensitive to the developmental levels through which the children are moving. If too much or too little attention is paid to skill development at a given time, children feel unable to perform a task and become conscious of their inadequacy. Such lack of confidence can develop the false impression that "only artists can paint."

Only when skill development is combined with other attributes is creativeness achieved. The teacher looks for and encourages those attributes that distinguish the beginnings of creativity. Dr. Viktor Lowenfeld has listed eight such attributes of creativity.

Sensitivity To Problems
Originality Fluency Redefinition
Consistency of Organization
Flexibility Analysis Synthesis

Awareness of these attributes can be helpful to the teacher in evaluating children's development and guiding them toward more effective art expression.

APPROACHES TO TEACHING ART

Exploration and Experimentation

The young child receives pleasure from even the simplest things he encounters. He is a born collector who brings home all shapes and sizes of things. They may be objects which have been discarded or they may be some of nature's many gifts to the child's world. The young child, as yet uninhibited by adult perceptions, sees in simple things like shells, pebbles, sand, sticks, and gadgets, treasures which engage his imagination. From these he may build a form which pleases him. Selecting from random materials and building a form is always an exciting new experience.

The door to this kind of exploration and experimentation should not be closed to the child when he enters the classroom. Instead, it should become a vital part of teaching. Meaningful discovery comes only after much of this experimentation is combined with careful guidance from the teacher. The child's discoveries may vary from how to work with simple materials to the higher order understandings of how to apply an art principle. At any level, however, the learning will come only when the child needs it to express himself.

Manipulation of Materials

In three-dimensional art projects the hand primary tool. This brings the learner in close tionship to the material. The child can "fee plasticity or the hardness, the smoothness or roughness of the material. Almost intuitively fingertips will suggest ways of handling some media as he shapes a lump of clay or twists a of wire. However, he needs guidance to develo manipulative skills if he is to advance to fu levels of development.

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Motivation

An art activity which is truly creative comes from the child himself. However, the child needs to be inspired before he can begin to create. To motivate children, the teacher must choose from many approaches which vary in appropriateness with the different materials and processes involved in the art activity.

- Personal Experiences—The teacher encourages the child to recall personal experiences which he may wish to share through art media.
- Planned Experiences—The personal experiences of the child need to be expanded to new horizons. Taking excursions outside the classroom enriches children's experiences and sharpens their awareness of their visual surroundings. Preplanning prepares children to know what to look for, follow-up discussion and evaluation fixes the visual impressions more firmly. Excursions may vary from viewing cloud formations to taking a trip to an art gallery.
- Resource Materials—Since it is not always possible to take excursions we find ways of creating experiences through other sources such as motion pictures, books, pictures, and art products (child and adult work).
- Dramatic Play—In the child's world of imagination he can pretend being anything from a waddling duck to a tall giraffe walking on his tall stem-like legs. Through simulating such body movements, the child gets a "feeling" for the animal he portrays.
- Demonstration—Although the material itself is often enough motivation to encourage manipulation, demonstration by the teacher is usually necessary for developing skills in a new media. Careful planning should precede all demonstration to insure against "follow me" approaches which close the door on creativity.
- Experimentation—Children need to experiment in many ways with a new material in order to learn its behavior. When a new media is introduced, children should be given a feeling of freedom which comes from not having to achieve a finished product.
- Creating the Product—The younger child's product often evolves from his experimentation alone. The older child should usually have a plan, with the teacher giving continuous guidance, depending on individual needs, throughout the process. As a child works, he learns to evaluate and reevaluate his product continuously when the process, not the project, is emphasized.

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DEVELOPMENTAL LEVELS IN THREE-DIMENSIONAL A

Modeling, Sculpturing, Constructing, Weaving

Self-expression varies with the developmental level of the child. If the child expresses himself at his own level, he will think creatively and independently. He will express his own ideas in his own way. The child who imitates has generally been pushed into a higher developmental level of achievement than he is ready for, or has been confused by adults' perceptions or standards. It is therefore important that the teacher be familiar with the developmental levels of children in art as well as with their general growth and development patterns.

As children grow and develop, they pass through certain levels in the various art activities. Each of these five levels represents certain specific advances in art ability for a given art activity. It is important for teachers to realize that these levels do not necessarily conform to grade level for every child. For example, one child may progress through several levels in an art activity in a single grade while another child may take several grades to accomplish this. The teacher's concern with these various levels is that each child is growing and making progress at his own pace; that he is encouraged to work at his current level in the different media.

Level One

Form and Space:	Experimental. . .develops manipulative skills.
Color:	Experiments with color with no definite approach. Uses color acco to emotional appeal rather than relationship to nature.
Texture:	Experiments with materials to discover their textures.
Creative Pattern:	Exhibits no conscious design approach.

Level Two

Form and Space:	Makes forms both imaginative and representational.
Color:	Experiments with color. . .creates own color scheme. . .makes secondary colors by combining two primary colors. . .begins to use blended colors. Begins to note color about him. Paints with more regard for realism in color.
Texture:	Experiments with different materials to find ways of creating textures with gadgets.
Creative Pattern:	Shows first conscious approach toward decoration of three-dimensional objects. Experiments with materials such as brushes, sponge.

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Texture:	Experiments with different materials to find ways of creating textures with gadgets.
Creative Pattern:	Shows first conscious approach toward decoration of three-dimensional objects. Experiments with materials such as brushes, sponge.

Level Three

Form and Space:	Develops first definite space concept.
Color:	Blends colors as well as uses pure colors. Explores mixing colors. Shows mood in selection of colors.
Texture:	Explores variety of ways to make textures. Shows more consideration for a material's natural characteristics.
Creative Pattern:	Uses many shapes which can be used to create a pattern—circles, squares, rectangles, triangles, and dots. Explores with free-form patterns.

Level Four

Form and Space:	Has concern for the contour of forms.
Color:	Experiments with vivid color combinations; uses color changes for emotional significance.
Texture:	Combines natural and man-made textures to create effective surface patterns.
Creative Pattern:	Makes designs with concern for rhythm and balance. Uses color schemes and lights and darks to achieve effects. Discovers forms in nature which motivate design experiences.

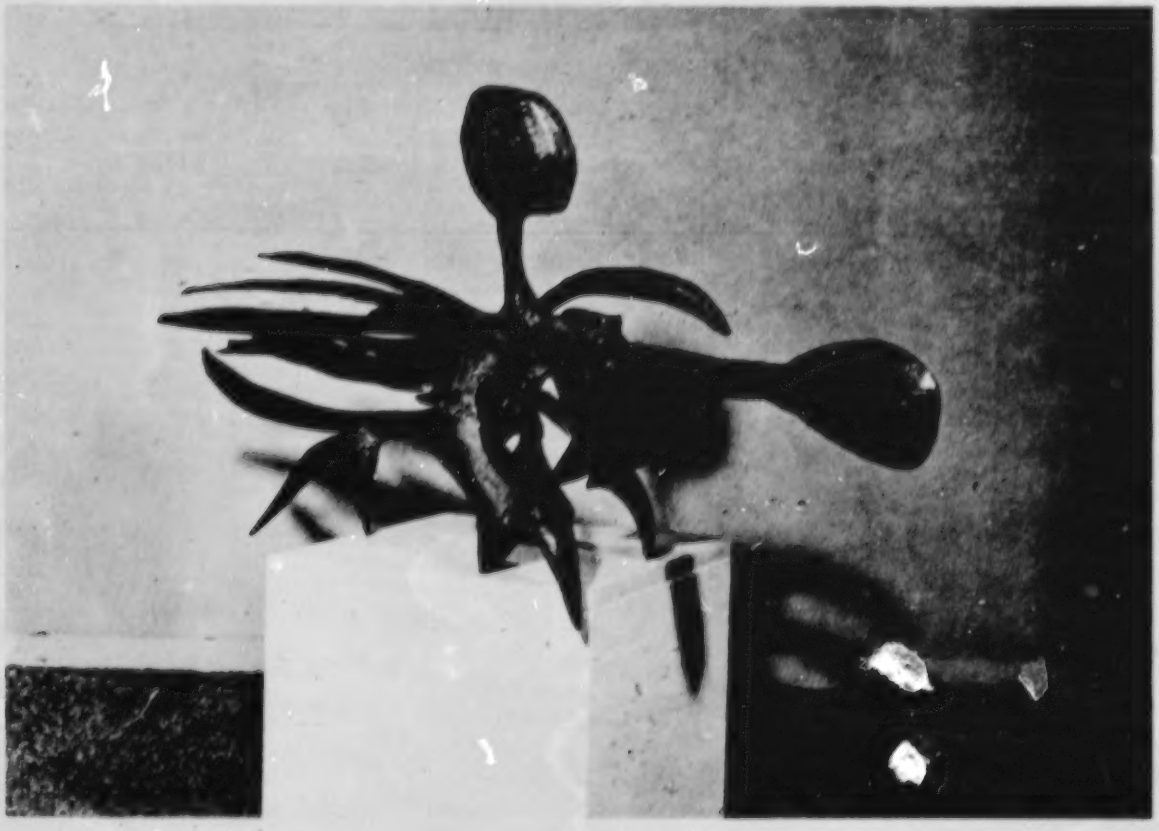
Level Five

Form and Space:	Uses negative and positive areas to create an interesting and imaginative form.
Color:	Uses different color values and intensities to create illusion in patterns and designs. Uses color repetition to create rhythm in pattern. Uses light and dark intensities to create designs.
Texture:	Uses materials to bring forth textural qualities; creates textures which enhance the form.
Creative Pattern:	Grows in knowledge of suiting the motif to the form and material. Uses lines, darks and lights, color, textures, and shapes effectively.

DISCOVER DESIGN

There are many avenues for approaching good design. Discussed here are principles of art involved in four elements of design—form and space, color, texture, and creative pattern.

The teacher needs to have some grasp of principles of art in order to guide children in their explorations. But to teach elementary children such principles of art could be inhibiting. It is only when these principles grow out of a child's individual needs and are tools immediately useful to him in expressing himself that they become a real and workable part of his art skills.

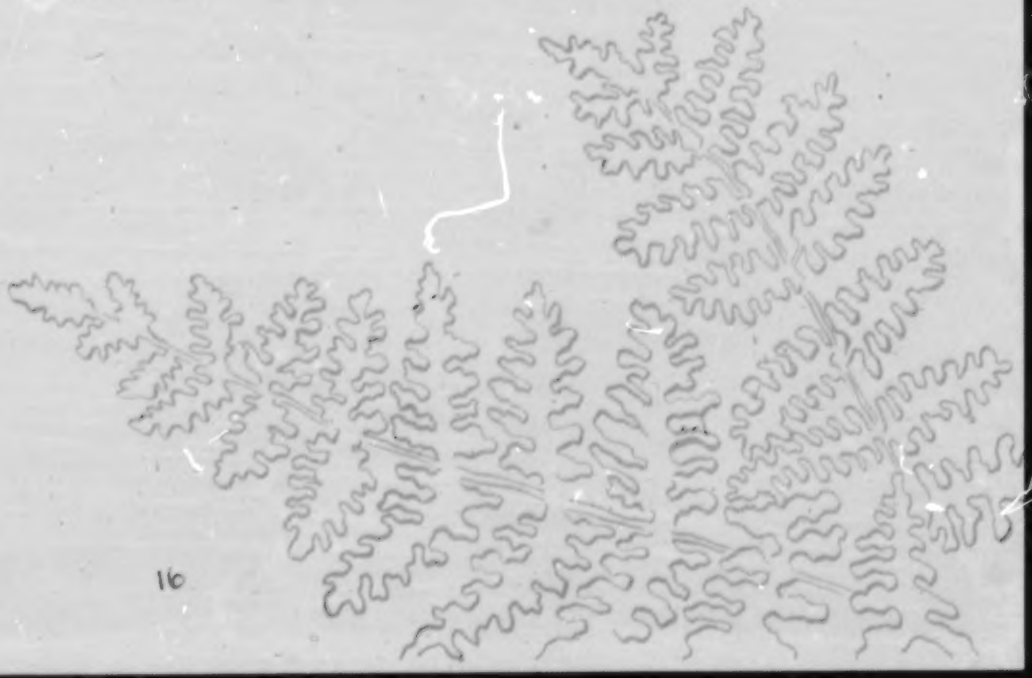


DISCOVERING FORM AND SPACE

Our world is full of forms, some man-made, others made by nature. There are many kinds of forms. One cause of variation among forms is the material of which the form is composed. Contrast, for example, the delicacy of a leafy fern to the ruggedness of a granite boulder.

The space in which a form is found is an essential part of the design. Consider the fern once more. Visualize the space between its leaves. This area is called the negative area, the leafy material itself being the positive area. Together the form and its surrounding space create design. Artists, whether they are creating pottery, weaving a delicate fabric, or sculpturing in stone, learn to use the negative as well as the positive areas to create a more beautiful form. In creating a three-dimensional form, the artist knows that the contours of the form change at each of several viewing angles. In some forms it is the structural elements, such as the veins of a leaf, the trunk and branches of a tree, the framework of a bridge, which are dominant. In other forms the masses create the effect, as they do in the billowy clouds in the sky or in an Egyptian pyramid.

Forms created in art are many and varied. They are placed in an area of space, creating a new dimension for themselves and for the space about them.



How Can Form and Space Be Developed in a Three-Dimensional Object?

Primary Grades

The young child creates a form when he models, sculptures, or constructs, whether it be a realistic or an imaginative object. When he pokes a hole through a lump of clay, he has created a space. At an early age, the child's efforts will be largely experimenting with the possibilities of material. This phase of his development should never be hurried. Pressuring the child into doing a finished project may lead to discouragement or conformity. As the child develops and becomes familiar with his material, he may progress from producing nondescript "lump" objects to creating simple, recognizable shapes involving space and mass. He will be concerned with the contour of a form rather than its structure. By pinching and pulling appendages from his lump of clay, he can model a dog, a cat, or a dragon.

Intermediate and Upper Grades

Children of these ages create ideas from materials with great feelings of personal pleasure. However, they are very sensitive to adults' feelings towards their creations, and may tend to try to satisfy others rather than express themselves. Their skills are often far behind their visual perceptions of that they wish to do. However, if they are encouraged to keep on experimenting, their skills will begin to develop.

Interest and skills may be stimulated by plenty of exploration and experimentation with different materials. The feeling for good design will come through the development of the power of "seeing," not just looking. The teacher gives guidance in helping children know what to look for in nature, in works of art, in architecture, and in commercial products. The ability to "close out" the many extra details and see just the basic contours is an excellent start toward one's own creating of a form.

DISCOVERING COLOR

Our world is a world of color. So long as there is light to see by we encounter color in our surroundings— vivid colors, pale colors, somber colors, gay colors— but always a shifting, changing world of color.

It is easy to select color when it is characteristic of the object— the tree is green, the sky is blue, the fire engine is red. In such cases, we paint a color which reproduces what appears before our eyes. However, people see color at varying depths: Mary may see only one green in her tree while John may see many values of intensities of green.

Individual differences in the way people perceive color and use it are found in all art work. The young child is usually quite adventuresome in his use of colors; he feels that a purple cow with yellow spots is very exciting. The older student, unless motivated in the area of design and color, will usually paint his cow only in realistic colors.

Colors can affect our moods and influence our actions. The warm colors—yellow, orange, and red—are more stimulating and agressive than are the cool violets, blues, and greens. The little papier maché clown may look gayer painted yellow, orange, and red than he would if he were painted with cool blues or violets. Colors also vary according to their setting. When placed with blues and greens, the color yellow may produce a quite different effect than when placed with magentas and violets. Colors depend on their placement with the other colors to create a total effect. Color, combined with line, texture, and surrounding space, is part of the creative pattern that makes up a three-dimensional form.

How Can Color Be Developed?—Primary Grades

In the very early stage of the child's development, he is more concerned with the color itself than whether it resembles the actual color of the object represented. After a period of experimentation, he will begin to notice that the sky is blue, the tree is green, the house is red. He will then be more interested in using colors more realistically.

Colors are important to young children, and some colors are more popular than others. When painting his three-dimensional form, the child may choose his favorite color. Ask a young child, "What color shall I use?" and his answer will probably be "Bright and gay like red."

Intermediate and Upper Grades

In three-dimensional art children have an opportunity to use and see color differently than in "flat" art. The importance of colors' relationships to each other seems to be more easily recognizable by the child in a three-dimensional form. In the construction of an assemblage, for example, the child arranges and rearranges his shapes and colors, thus seeing them in various relationships to each other.

The different materials and processes in three-dimensional art provide new learnings with color. Children can compare the glazed clay figure with the dull-oxide painted clay bowl, the flashing brilliant cardboard mobile with the natural-colored stabile of wire, wood, and dried weed.

In the three-dimensional form, light and dark values are more easily seen. In a creative pattern shapes painted in light colors on a dark background create an effective contrast. There are many ways to achieve different effects with color. The teacher should be sure that children have real opportunity for exploration and discovery with color and light values.

DISCOVERING TEXT

All about us there are many different kinds of surfaces—smooth, rough; shiny, dull; even, uneven. These differences in the surface reflect the light differently, creating texture. While some surfaces absorb light, other surfaces reflect.

If we look carefully, we can see different textures all about us. Some we see, some we feel, and some we create. It is fun to go outside and look for all the different types of textures—the feathery bird, the fuzzy cattail, the smooth sidewalk, the rough-barked tree.

Man makes many interesting textures, selecting and organizing them for their contrast and harmony. In the buildings he constructs he uses glass, brick, stone, and wood for variety and interest. In clothing he may put several textures together to produce interesting effects.

The visual and tactile senses have a strong interrelationship. Too often the restriction "do not touch" is imposed on us. Consequently, we learn to "feel" the texture of the object through our eyes. The young child has no such inhibitions. Place a fuzzy toy or a fur jacket before him and he will immediately stroke it. Place beach-polished pebbles before him and he will roll them in his hand, feeling the smoothness as well as the shapes. Such ventures in "feeling" are essential in developing the power of "seeing." Without the experiences of touching different surfaces made by nature or man, one could never reconstruct these experiences mentally to perceive texture visually.

We have a wide selection of materials in our schools, our homes, and in nature. Each of these materials has its unique textures, from the roughness of the bark of wood to the smoothness of a piece of paper. In selecting materials, texture and consistency must be considered in relation to the process and product planned. Children should be helped to work with the material rather than against it. Weathered pieces of bark may be beautiful in a "natural" collage, but to create a bright-colored mobile it would be better to choose pieces of colored poster board rather than to paint the bark a bright color.

DISCOVERING TEXTURE

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Primary Grades

The association of feeling and seeing cannot be stressed enough. The young child has not as yet stored up a reservoir of "mental images" of touch. Here again the power of observation needs to be developed through the guidance of the teacher. Nature is a marvelous classroom for children, with no "Do Not Touch" signs. From nature collect some textured materials and bring them into the classroom. When building a collection, try unusual things such as dried wild artichokes, pods and bark from eucalyptus trees, abalone shells, dry seaweed, and combine these with materials from the classroom. Sometimes the materials themselves will motivate children to make fresh creative expressions.

Intermediate and Upper Grades

It is important for children to learn about the properties of materials, such as the pliable quality of clay, the hardening quality of plaster of paris, the flexibility of paper. Some materials, such as clay, retain a consistency which may be gouged out or attached to other parts. Other material such as plaster of paris may be poured to fill out a design in sand, or left to harden to be sculptured and smoothed. A piece of paper can be cut, bent, or folded to create textures.

Experimentation and variety of materials are the key components to producing interesting surfaces. But ultimately the texture should enhance and be a vital part of any art product.

DISCOVERING CREATIVE PATTER

Pattern is exciting. It attracts and holds the eye. We use pattern to enrich and beautify surfaces. Such surfaces present separate, regularly repeated shapes, colors, and other design elements. Any single element is a motif; the repetition of motifs in a pleasing arrangement creates pattern.

There are many shapes which can be used to create pattern. Circles, squares, rectangles, triangles, and dots are geometric motifs. The world of man-made objects is a rich source of such motifs. Nature can provide inspiration for many free-form motifs, as in the rhythmic flowing symmetries of rippling water.

Pattern is designed with special attention to five elements—lines, darks and lights, colors, textures, and shapes. These five elements should be organized to lead the eye rhythmically along the decorated surfaces. Pattern is used to enrich entire surfaces, to emphasize certain elements such as borders, or to bring out selected areas.

How Can Creative Patterns Be Developed in Three-Dimensional Objects?

Primary Grades

The teacher can guide young children in experiences which will stimulate their powe of observation of the many patterns around them. Nature is a wonderful classroom i developing the power to "see." There are moving designs made by the rhythm of wind it blows through the branches of trees, on the surface of water, or through fields of tumbl weeds. There are silent surface patterns painted on stones and shells, engraved on mountainsides and beach sand. Children should also be encouraged to see how man al makes patterns as when he plows or erects buildings; as when a boy in tennis shoes walki through dust leaves marks that suggest repeated motifs. Beautiful motifs for patterns ar about us. Have the children discover and create their own.

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Intermediate and Upper Grades

Older children learn that creative patterns for three-dimensional shapes must be planned differently than those for two-dimensional shapes. Only a part of the total form is visible at one time. The design must lead the eye around and in the form. Each part of the design should add to its continuity. To achieve this continuity there may be repetition of motif and variety of motif within the repetition.

Pupils should experiment with varied ways of decorating forms and shapes. The pattern they use may be regular, the repeat using the same motif in the same size and shape, or the repeat may be irregular with the motif varying in size and shape. As children experiment in creating decorative surface patterns, they should realize that whatever the type of pattern they use, it should never become more important than the object it is designed to enrich. No matter how attractive the pattern is, if it does not become an integral part of the form it decorates, it does not fulfill its function.

TEACHING ID

The ideas described in this book are presented to help the teacher introduce various media and processes used in three-dimensional forms. They are by no means inclusive of the many possible techniques, but have been selected as types of activities which may stimulate teachers and children to experiment in new ways. The overall purpose is to open avenues of exploration that will lead to creative experiences.

The child's creative experiences occur when he utilizes not only what he has been taught, but also what he has discovered on his own. These experiences are put into practice and used as he explores and discovers new ways to express his own ideas, experiences, and feelings. Careful planning is necessary to give the child time to do this necessary experimentation.

At the same time that we encourage exploration, we pay attention to development of skills in modeling, sculpturing, painting, and the other art processes. In the development of these skills, the discovery approach is important. Art skills which are developed as they are needed are remembered and used long after memorized rules have been forgotten.

Art should be a problem-solving activity. It should teach the child to think, to observe accurately, to meet new problems, and to try different solutions. Through their own experimentation, we hope children will develop into individuals who will think independently and creatively rather than be dependent on others for answers.

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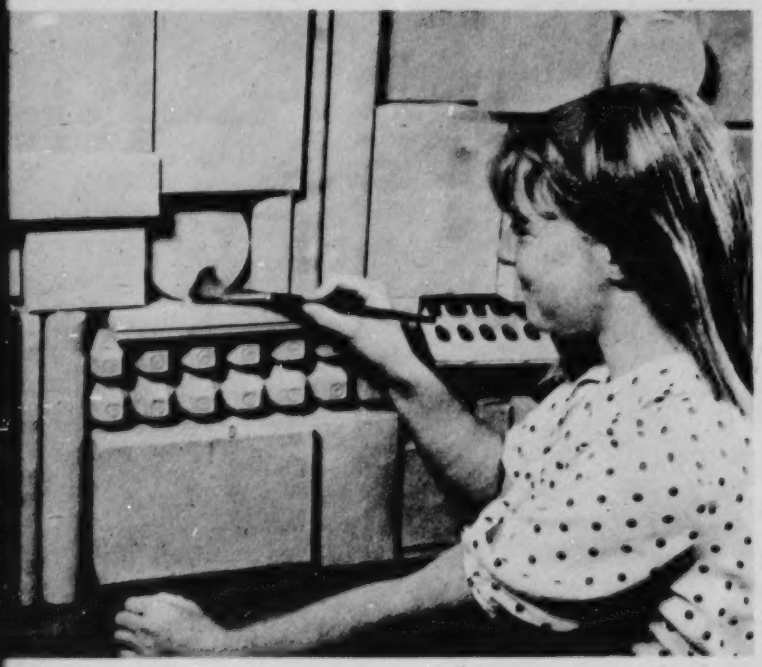
ASSEMBLAGE

Children need some creative outlet in the classroom besides drawing and painting, and one project that youngsters respond to, and usually find immediate success in, is the paper-box assemblage. The assemblage is a three-dimensional spatial arrangement in which paper-box forms have been assembled into a mosaic-like construction. It is virtually a "bas-relief" sculpture in which simple paper volumes have been placed together, pieced together, or reformed so as to produce a unified composition in which the single paper items project outward from the base upon which they have been pasted. Once the final arrangement among volumes and shapes has been attained, a dramatic interplay of light and shadow is discovered. Designs and details in tempera applied to the assemblage produce added excitement and enjoyment.

The assemblage offers children the challenge to manipulate and construct with commonplace materials in uncommon ways. The paper-box assemblage lends itself easily to the varying stages of children's construction ability. One word which best describes "assemblage" is—imagination!



MATERIALS AND EQUIPMENT

Heavy-weight chipboard for base (sturdy cardboard, cel
varieties of wallboard, and 1/4" plywood are acce
substitutes)
Brush for pasting—1" flat paint brush
Brush for painting—3/4" easel type, flat bristle, l
handles
Brush for details—small, round-tipped, watercolor bru
Powdered or liquid tempera
Assortment of discarded paper-box forms such as egg ca
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Assortment of related paraphernalia such as dowel r
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Newspaper to cover working surface
Shirts or aprons
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Brush for pasting—1" flat paint brush
Brush for painting—3/4" easel type, flat bristle, long handles
Brush for details—small, round-tipped, watercolor brush
Powdered or liquid tempera
Assortment of discarded paper-box forms such as egg cartons, cereal and salt boxes, mailing tubes
Assortment of related paraphernalia such as dowel rods, plastic foam balls, corks, spools
Newspaper to cover working surface
Shirts or aprons
White glue

Process

1. Discuss the assemblage as an art form with the entire class.
2. Describe the paper-box forms and other materials to be brought to class.
3. Collect and sort the materials.
4. Arrange on chipboard base, without pasting, several possible mosaic-like designs.
5. Once a simple, effective design has been attained, trace around the bottom of each paper box so as to record its exact position on the base.
6. Lightly sandpaper each item to prepare surfaces for painting later. Apply white glue somewhat generously and replace item to marked position on the chipboard.
7. Discuss color and decide upon a color scheme for the assemblage.
8. Apply powdered or liquid tempera mixed to a creamy consistency to designated items or areas of items; apply touch-up coat if needed.
9. When paint is thoroughly dry, apply designs and details in tempera.
10. Add any related decoration which might contribute to the total assemblage.
11. Spray the finished assemblage lightly with clear plastic so as to waterproof and toughen the painted surfaces before hanging the assemblage as a wall decoration.

Teaching Hints

Inasmuch as water base paint is repelled by waxed or plastic surfaces, avoid co materials. Preplan before pasting paper items to chipboard base. Planning, pasting, a painting should be completed on flat working surfaces, table or floor. Arrange beforeh for storage of incoming materials, for general work materials such as paste and paint, for work in progress as well as completed work. Avoid smothering an attractice, effect design with too much added detail. Hang completed assemblages as wall decorations.

Evaluation

The success of the paper-box assemblage depends to a large extent upon the size and assortment of the materials collection. Developing the child's perceptual sensitivity through experiences in selecting from a variety of shapes and sizes those that he can himself build into a unified design is an important part of the creative classroom art program. Teachers should encourage observation, preparation, planning, and use of imagination in this process. The child's adeptness in visually sensing the total assemblage as he works on the subordinate parts is essential in this project. The completed assemblage is testimonial to the child's skill, self-discoveries, and satisfaction.

Suggested Variations

Commonplace materials such as lumber scraps and "mill ends" may be used. Discarded preschool building blocks and Tinker Toys also make effective assemblages. Dowel rods, plastic foam products, corks, spools, knobs, etc., enhance effects.

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PUPPETS AND MARIONETTES

PUPPETS

The magic world of make-believe where dogs and caterpillars talk is familiar to every young child. The real world and the world of fantasy overlap and sometimes blend as one exciting place in which the young child lives. It is important to kindle this spark of imagination and guide it toward creative thinking. The puppet and his adventures can transport the child into this land of make-believe, projecting him into situations which may be fantasy or perhaps quite real to him and his problems.

Primary Grades

MATERIALS AND EQUIPMENT

Paper bags in various sizes
Colored construction paper
Miscellaneous materials such as buttons, raffia, sequins
White glue
Scissors
Tagboard
Cloth
Old socks

Paper Bag Puppets

1. Fit bag over child's hand allowing bottom of sack to fit down over folded fingers.
2. Practice moving fingers to make bag move.
3. Cut and glue face on folded down bottom flap of bag.
4. Design remaining bag as body of figure.

Finger Puppets

1. Paint a face of a person or animal on flesh-colored construction paper.
2. Cut and glue strip of tagboard to fit around index finger.
3. Glue face to center of tagboard ring.
4. Place handkerchief over finger.
5. Slip tagboard ring over handkerchief.

Sock Puppets

1. Insert hand into foot of sock.
2. Mark position for eyes, nose, mouth, other featu
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Sock Puppets

1. Insert hand into foot of sock.
2. Mark position for eyes, nose, mouth, other features.
3. Glue or sew on facial features made from scrap.

Laminated Paper Puppet Heads

MATERIALS AND EQUIPMENT

Newspaper, paper towels, facial tissue
Liquid starch, white glue
Cheesecloth
String, tagboard strips
Cloth for costume
Scissors
Paint and shellac
Bottle, narrow neck
Material for hair, such as frayed rop
Decorative materials

Process

1. Roll tagboard strip to fit the first finger loosely and tie firmly.
2. Slip roll over bottle neck.
3. Wad sheets of newspaper tightly for head.
4. Cover newspaper wad with cheesecloth. Tie wad with string to tagboard roll, leaving half of roll uncovered for neck. Cover head by paper strip method (see page 39).
5. Apply three layers of paper strips to cover string around neck.
6. For large features, paste pieces of tagboard on the head with layer of paper strips. For smaller features pinch the paper strips when still set.
7. When the puppet head is thoroughly dry, paint with poster paint, then shellac. Apply hair, facial features, etc.
8. Remove from bottle neck and sew on costume.

MARIONETTES

Sketch plan on a 12- by 18-inch piece of newsprint. Marionettes are usually 16 to 13 inches tall including head.

MATERIALS AND EQUIPMENT

Modeling clay
Newspaper, paper toweling
String
Paste
Paint
3-inch wooden dowel with hole 1 inch from top
Cutting tool
Copper wire about 6 inches long

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Newspaper, paper toweling
String
Paste
Paint
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Cutting tool
Copper wire about 6 inches long

Process

Molding the head and face:

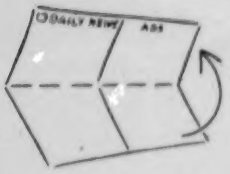
1. A burned-out 40-watt light bulb may be used as a base for a thin coat of modeling clay. Make clay thicker where the face will be.
2. Halfway between top and chin line of head, press thumbs gently into thicker clay to form eye sockets. Add small balls of clay to form eyeballs.
3. Add a piece of clay for the nose.
4. Add clay to form chin and push clay up on each side of nose to form cheeks.
5. Remember to add ears if a boy puppet is being made.
6. Facial features may be painted on later. Cover the head by paper strip method (see page 39), or use plaster impregnated gauze.
7. Let head dry thoroughly—2 days or more.
8. Cut around the head from top to bottom through the ears. Pull the face gently off the clay, then pull off the back of the head.
9. Run a 6-inch copper wire through the hole in the doweling, twisting each end around a knitting needle to form small rings for attaching strings. Put a screw-eye in bottom of dowel.
10. Place dowel in back of head with rings just outside of papier maché and screw-eye at bottom of neck.
11. Join face to back of head and cover cut sides with four layers of paper toweling and newspaper.
12. Paint head with tempera or oil paints. Shellac if tempera is used.
13. Make hair with tape, yarn, hair, roving, or theatrical crepe hair.

MATERIALS AND EQUIPMENT

Newspaper
Paper towels
Paste
String
Wire
Nylon stockings

Newspaper body segments (make two):

1. Take a full unfolded sheet of newspaper (2 facing pages, 30 i wide) and fold from bottom to top.
2. Fold doubled sheet bottom to top again to get a crease line.
3. Unfold to first folding; fold bottom edge to crease line, then edge to crease line.
4. Fold two halves together at crease line to get a 3-inch wide s inches long.
5. Fold both outside edges to meet at center of strip, fold resu outside edges to center again; then fold halves together to get by 4-inch body segment.



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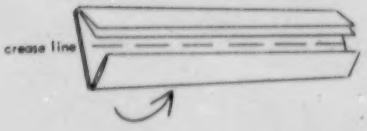

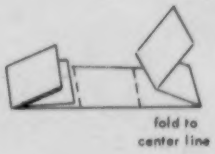

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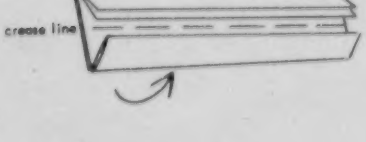
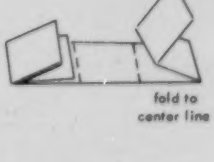
3. Unfold to first folding; fold bottom edge to crease line, then top edge to crease line.
4. Fold two halves together at crease line to get a 3-inch wide strip 30 inches long.
5. Fold both outside edges to meet at center of strip, fold resulting outside edges to center again; then fold halves together to get a 3- by 4-inch body segment.





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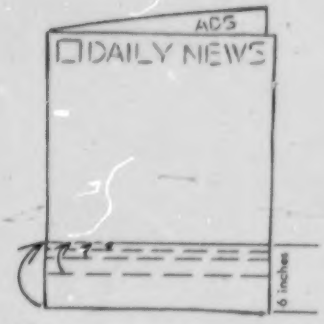
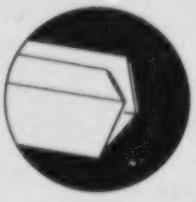
36

6. Tie string around middle of body segment. Apply paper strips to body (see page 39), leaving loops open at top and bottom for inserting string to attach arms, legs, and two body segments to each other.

Newspaper arm and leg segments (make eight):

7. Take a doubled sheet of newspaper (15 inches wide) and fold from bottom to a point about 6 inches up.
8. Fold new bottom up to 6-inch line, then fold resulting bottom up again to the 6-inch line.
9. Cut at edge of folded material to get strip about 3/4 inch by 15 inches.
10. Fold outside edges to meet at center; then fold halves together to get segment about 3/4 inch by 3 3/4 inches.
11. Join segments with string through loops at ends to make 4 pairs (2 arms and 2 legs).
12. Join arms and legs to body segments, and body segments to each other, with string loosely so as to allow free movement of parts.
13. Add string to top loop of body for tying on head; add hands, feet, clothing. Weight feet.





Stocking arms and legs:

1. Make body segments as before; then thread nylon stockings through shoulder and hip loops, gluing to hold in place; then cut stocking so as to leave about 8 inches of stocking for each arm and leg.
2. Make upper arms and legs by rolling 3-inch newspaper strips around stockings (starting about 5/8 inch from body to allow movement). Cover rolls with paper towels and paste.
3. Tie a knot below pasted rolls for elbows and knees; then make lower arms and legs.
4. Add papier maché hands and weighted feet.
5. Run wire through shoulder loop under the stocking and loop at top for attaching head.

Teaching Hints

There are many kinds of puppets, ranging from the very simple finger puppet to a movable lifelike marionette. The age and skills of the children will determine the choice of what kinds of puppets will be made.

Lively sock puppets may serve spontaneous situations; more elaborate marionettes will be called for in a long-term project of creating, planning, and producing a play.

When the entire class is involved in producing a play, the children take different responsibilities. Some write the play, some make the puppets, some design and construct a stage and the properties needed for the play.

Puppetry is adaptable to all grade levels. Marionettes can be successfully constructed by children beginning in the intermediate grades and continuing with increasing detail in design and manipulation through the upper grades.

38

Evaluation

Perhaps this art process is one of the best for developing creative attributes. Searching for and making choices of materials give children the opportunity to redefine objects for new purposes. Next, making and fitting materials to create the desired personality of the puppet challenges imagination as well as develops craftsmanship.

The process of making a puppet or marionette is certainly not the end product. Using the finished puppet to promote development of language arts and concepts in social studies is a vital use of the puppet.

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MOBILES

A thing of beauty that floats in the air. . .an ever-changing pattern of forms and shadows. . .a suspended movement—all these descriptive phrases could refer to the mobile.

A good mobile should be more than an object dangling in space. It should be designed, planned, and worked out so that it has a unity of design—an ever-changing design that is constantly pleasing to behold.

MATERIALS AND EQUIPMENT

The following materials are suggested; many more are possible:

- Transparent materials in assorted colors—tissue paper, cellophane
- Construction paper, assorted colors
- Cardboard, tagboard, and mat board
- Thin metals and plastics
- Balsa wood
- Wire, reed, nylon thread, fishing line
- Fishline swivels, small screw eyes
- Glue or cement
- Miscellaneous decorative objects—beads, glass bubbles, shells, Christmas balls

MOBILES AND STABILES

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Miscellaneous decorative objects—beads, glass bubbles, shells, Christmas balls

Process

1. Select theme.
2. Make selection of materials, colors, and shapes to be used.
3. Group shapes on sheet of paper arranging and rearranging to achieve balanced effect.
4. Study negative areas between shapes to achieve design and balance.
5. Proceed by working from bottom to top of mobile, attaching shapes to achieve balance.
6. Experiment with movement of shapes by hanging the partially finished mobile during the construction process.

Teaching Hints

The teacher should make a mobile before attempting to help the children so as to become acquainted with the skills required. Since the constructing of a mobile needs extra hands, several children should work together. A separate storage box should be provided for each group. Allow enough space for each group to experiment with their materials and with the hanging of the mobile in the process of building it.

STABILES

A stabile is a self-supporting sculpture, planned and executed so it has a unity of design. Construction of stabiles stimulates children's imagination and helps develop discrimination in the selection of materials. In two-dimensional creation, such as collage, materials need only be adaptable to flat surfaces. However, for a three-dimensional structure such as a stabile the selection of materials is a more complex problem.

The idea and design must be adaptable to the structural problem of holding the various parts together. At the same time the art elements of line and shape, balance and movement must be dealt with, keeping in mind that space is an integral part of the design.

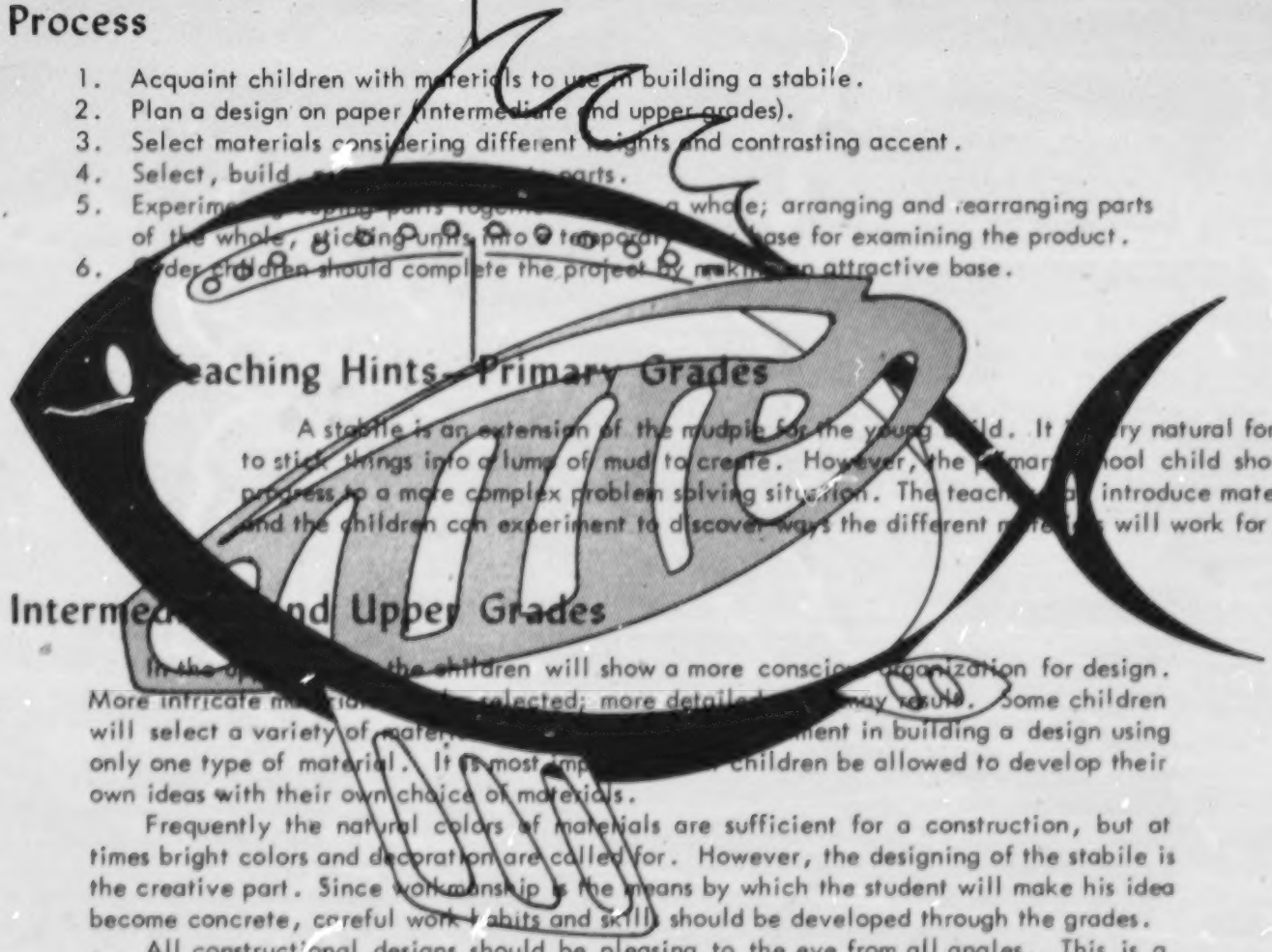
MATERIALS AND EQUIPMENT

The following materials are suggested; many more are possible:

Wood products—lumber scraps, tongue depressors, etc.
Reeds, wires, tubing
Cardboard, transparent paper
Chicken wire, metal rods and shapes
String, yarn
Boxes, cartons, clay, wood blocks for bases
Paint, glue
Scissors, pliers, tin snips
Hammer, nails, saw
Screws, screw driver

Process

1. Acquaint children with materials to use in building a stabile.
2. Plan a design on paper (intermediate and upper grades).
3. Select materials considering different heights and contrasting accent.
4. Select, build [illegible] parts.
5. Experim[illegible] parts together [illegible] a whole; arranging and rearranging parts of the whole, sticking units into a temporary base for examining the product.
6. Older children should complete the project by making an attractive base.



Teaching Hints—Primary Grades

A stabile is an extension of the mudpie for the young child. It is very natural for him to stick things into a lump of mud to create. However, the primary school child should progress to a more complex problem solving situation. The teacher may introduce materials and the children can experiment to discover ways the different materials will work for them.

Intermediate and Upper Grades

In the upper grades the children will show a more conscious organization for design. More intricate materials may be selected; more detailed [illegible] may result. Some children will select a variety of materials for experiment in building a design using only one type of material. It is most important that children be allowed to develop their own ideas with their own choice of materials.

Frequently the natural colors of materials are sufficient for a construction, but at times bright colors and decoration are called for. However, the designing of the stabile is the creative part. Since workmanship is the means by which the student will make his idea become concrete, careful work habits and skills should be developed through the grades.

All constructional designs should be pleasing to the eye from all angles. This is a challenge for the most apt of students. The "look through" feeling stresses the importance of space as an integral part of the design of a stabile.

Evaluation

Guiding questions and individual evaluation should be continuous throughout the construction of mobiles and stabiles to develop space-line-form concepts. The relationship of the parts to the whole—each part contributing to the unity of the design—is the important learning.

CARVING

Children enjoy creating in three-dimensional media, as when they carve shapes and forms in various materials. Although some materials are too hard for the younger child, mixtures such as vermiculite and casting plaster can provide a light-weight material giving the young child an opportunity to express himself by carving with simple tools. As the child experiments in cutting, scratching, and gouging he will learn that carving is a subtractive process, the opposite of modeling, in that a form is created by taking away from the whole.

MATERIALS AND EQUIPMENT

- Vermiculite
- Casting plaster
- Sawdust
- Waxed containers such as milk cartons, cheese conta
  or boxes lined with heavy waxpaper
- Plastic bucket for mixing
- Sandpaper
- Steel wool
- Sponges
- Spoons, nails, blunt knives, discarded tools such as
  saws, files, rasps (for the younger children), s
  chisels, light mallets, pocket or paring knives
  older children)

Plaster Block Carving

1. Make plaster blocks by mixing vermiculite and plas
large plastic containers. The proportions may be ch
to achieve varying degrees of hardness—the more p
the harder the mix. Add 3 parts plaster and 1 part v
ulite to 3 parts water, stirring constantly and rapidl
consistency of thick syrup results.
2. Pour mix into containers (plaster begins to harden qu
Remove forms from containers in about 30 minutes,
they will be ready to carve. The blocks will keep i
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3. Outside the containers, the blocks will remain moi
easy to carve for several weeks. If a block becom
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- Plastic bucket for mixing
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Plaster Block Carving

1. Make plaster blocks by mixing vermiculite and plaster in large plastic containers. The proportions may be changed to achieve varying degrees of hardness—the more plaster, the harder the mix. Add 3 parts plaster and 1 part vermiculite to 3 parts water, stirring constantly and rapidly until consistency of thick syrup results.
2. Pour mix into containers (plaster begins to harden quickly). Remove forms from containers in about 30 minutes, when they will be ready to carve. The blocks will keep indefinitely in the containers.
3. Outside the containers, the blocks will remain moist and easy to carve for several weeks. If a block becomes hard before the carving is completed, it may be submerged in water to soften it again.
4. Become familiar with qualities of sculpture through sculptors' work, real or pictorial. Look at it from all angles.

5. Make large detail drawing of subject to be carved. Then make 6 sketches of front and back, both sides, and top and bottom of subject, emphasizing basic shape rather than detail.
6. Experiment with tools before beginning actual carving on project.
7. Encourage creativeness in shape and form through changing shape from original design sketch. Avoid carving details in early stages when block is too soft.
8. Study shape from all angles and sides as work progresses, taking care to concentrate on entire shape rather than parts. Detail may be added when block begins to harden.
9. Achieve a finished object by processing the surface—sanding for smoothness or creating texture.

Variations in Materials

Other materials can be made for experiences in carving. Mixing equal parts of plaster, sawdust, and water produces blocks that are lighter than pure plaster blocks. Materials which may be purchased include foam glass (a soft carving material), fire brick and feather stone (a harder carving material recommended for junior high school).

Teaching Hints

Establish safety rules, with special attention to proper handling of tools and protecting eyes from chips. Standards for working should be established before beginning this project. Protect area where materials are being mixed and poured into containers. Plaster mix should never be poured into the sink; wash hands, tools, and containers in a bucket and dispose of outside. Have lined wastebasket or cardboard carton available for chips and debris. Cover table or desk before carving begins.

Evaluation

The student should learn to see that simplicity in art is the true beauty in the everyday things about us. He should learn that when we work with a certain medium such as clay, plaster, or wood, the special characteristics of the material should be appreciated and expressed in the forms created from them.

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SAND CAST SCULPTURE

Sand cast sculpture, either at the beach or in a sand-box frame, is a project that everyone can enjoy at any age. It offers both directness and expressiveness of a rather primitive quality.

An explanation of the process and its possibilities in the classroom, at home, and at the beach, as well as a short demonstration by the teacher of the impressions in the wet sand made by the various tools, will be more than enough motivation to get any group excited about getting their hands into the materials.

MATERIALS AND EQUIPMENT

- Sand
- Plaster of paris or casting plaster
- Form frame—
  - .for small sculptures—wooden cigar or shoe boxes with top and bottom removed.
  - .for larger sculptures—4 pieces of 2" x 4" lumber
  - .for free-form sculptures—piece of plywood
- Tools to make impressions, such as spoon, table knife, pencil, spatula, chopper, bottle lid, clothes pin, cogwheel, dowel, hollow plastic tubing, shells, potato masher, and odd-shaped pieces of plastic, metal, and wood
- Large paper clips
- Expanded metal (type used as plaster lathing in construction)
- Plastic buckets and basins for mixing plaster (plastic containers clean up easily; if plaster dries on the sides, they can be bent and the plaster will crack off)
- Clothes sprinkler

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Process

1. Pour sand into the form frame, or onto the piece of plywood.

2. Moisten the sand with enough water so that the sand holds its shape when pressed between the fingers.

3. Smooth the sand in the frame or on the plywood to provide a flat, even surface.

4. Moisten the sand with a fine spray from the clothes sprinkler. This gives the surface a roughened texture which is more interesting in the finished work than a smooth surface. The sand should be damp but not soggy.

5. Having an idea in mind, scoop out sand in a concave depression. Various levels can be achieved by digging some lines or spaces deeper than others.

6. Pattern can be achieved by imprinting with different tools.

7. Shells, pieces of tile or glass, stones, etc., can be added for accents.

8. Prepare the plaster. Sift plaster through the fingers into the water until it rises in a peak about one to one and a half inches above the water. When the peak becomes wet through, mix gently with the hand from bottom up until the plaster starts to thicken to the consistency of very thick cream. Then pour plaster slowly and evenly into the sand mold using the hands or a small container. Care should be taken not to pour so fast that part of the design is broken down in the sand.

9. Immediately wash hands, tools, and containers in a bucket of water. Empty bucket outside as plaster and sand clogs plumbing.

10. Make a hanging fastener from a large paper clip or a piece of wire by bending into a long inverted —v—. Embed fastener in the plaster before it hardens, about 10 minutes after casting.

11. After the plaster has set and hardened about 30 minutes, or is cool and hard to the touch, the work can be lifted carefully from the sand mold and washed off under an outside faucet.

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Teaching Hints

These pieces of sand cast sculpture look best in their natural form without any special painting or decorating. If the project is being done in a classroom, have several setups where a couple of children can work at a time. It is best not to have the whole class working on this project at the same time.

The same sand and frames can be used over and over again, and the tools and gadgets will make a variety of designs and combinations for each individual. Beach sand or any ordinary sand can be used. Plaster of paris is very good but is more expensive than casting plaster. For free form shapes place wet sand on a piece of plywood using the fingers to build a free form dike to contain the plaster.

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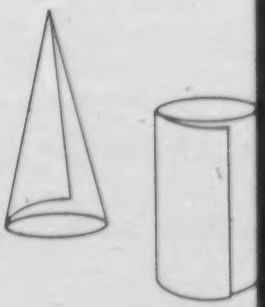
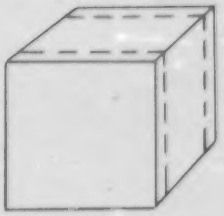
PAPER SCULPTU

Paper sculpture is the shaping of paper into three-dimensional forms. Children can fold, roll, pleat, and wad paper to achieve a great variety of effects. They can find ways to make stiff paper stand by itself in order to create structural designs. To create decorative effects, paper can be fringed, curled, and punctured.





MATERIALS AND EQUIPMENT

- Paper—all kinds
  - Poster paper is light in weight and folds easily
  - Construction paper is best for building forms
- Scissors
- Stapler
- Rubber cement
- Ruler
- White glue, paste
- Tempera paint
- Brush—small watercolor

Basic Shapes

Cylinder—Roll a sheet of paper and fasten it firmly at top and bottom with staples or adhesive.

Cone—Make a circle of paper and cut out a pie-shaped piece. Roll the remaining part and fasten. The character of the cone—fat or slender—will depend on the size of the segment removed.

Box—A square box may be formed by the 16-fold method. Another method is to draw lines around the edge of the paper the same number of inches from the edge as the box is to be high, then crease, fold, and paste.

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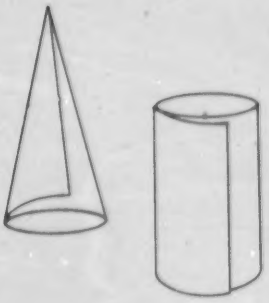

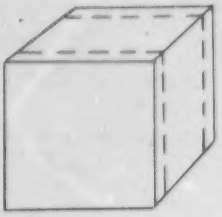

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Basic Techniques

1. Paper Strips—Many forms can be constructed with paper strips. Looped forms are very popular. Staple together at one end several strips of paper. The outside strips are pushed up to form loops, and are then stapled to the center strip.
2. Folding—Paper is usually folded in straight lines. Accordion pleats are made by alternating the direction of the folds.
3. Scoring—Paper is scored by partially cutting along the desired fold line with a blade of a scissors or a knife. Scoring, done on the opposite side of the direction of the fold, makes possible sharp neat folds on heavy paper or a fold on a curve.
4. Curling—Run a scissors or a knife blade firmly down a strip of paper. The paper will fall back in a curled effect. Wrap a strip of paper firmly around a pencil, then carefully ease out the pencil. The paper will remain curled.
5. Cutouts—Very unusual patterns are the result of this technique. A sheet of paper may be folded in half twice, may be pleated, or may be folded on the diagonal. Various shapes and contours are then cut from the edges of the fold.

Stuffed Figures

1. Draw a large shape of a simple figure, such as a fish, on a piece of white butcher paper. Keep appendages short and wide.
2. Paint fish using creative patterns to emphasize design.
3. Cut out fish.
4. Trace around fish outline on another sheet of paper to get shape for a second side.
5. Paint and cut out second side of fish.
6. Staple two sides together, leaving opening to insert stuffing.
7. Tear and stuff newspaper into fish to give desired fullness. Avoid stuffing small areas.
8. Primary grade children may enjoy making a mobile of stuffed figures of varying sizes.

Teaching Hints

Children should have the opportunity to handle many weights of paper in order to get acquainted with their qualities. Construction paper, poster paper, newsprint, tissue, and cardboard all have different functions in sculpture. If a form must stand, construction paper is preferable. Poster paper is best for folding to make decorative cutout patterns.

Evaluation

Paper sculpture is an exciting art project for all children. Here is a wonderful chance to encourage originality in both process and product. No set standards are imposed; the teacher teaches certain skills, the child then uses these skills to produce his own art products. This is another art lesson offering many opportunities for the child to make "new beginnings." Each step in the process produces another starting point.

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WOOD SCULPTU

All children like to work with their hands. Those who do not particularly take to drawing and painting need the opportunity to work with wood. Almost all boys and girls have a natural liking for wood. They love to carve, rasp, and sand it. Discovering the wood's grain and texture as a form takes shape under their hands is rewarding in itself. While younger children lack the dexterity to make forms out of wood as described below, they are able to make simpler objects which give them great satisfaction.

MATERIALS AND EQUIPMENT

- Blocks about 2 or more inches thick of softwood for intermediate grade children, of hardwood for older children
- Saws
- Rasps and files
- Sandpaper—coarse, medium, fine
- Steel wool
- C clamps
- Vises
- Table blocks
- Dowels or brass brazing rods to represent legs, necks, or beaks
- Finishes—oil, stains, wax

Intermediate and Upper Grades

Process

1. Select a block of wood.
2. Sketch a figure such as a bird or animal on the face of the block in a size that fits.
3. Sketch on the two sides of the block side views of the figure.
4. Clamp the block, then saw main chunks of unwanted wood from around the sketched block of wood.
5. Rasp areas too small to saw. Keep turning the form, working from all angles. Keep checking the original sketches as the form takes shape.
6. Rasp in different directions to find best cutting direction.
7. Sandpaper thoroughly to get a satin surface.
8. Apply the chosen finish.
9. Add dowels or brass bracing rods for legs, necks, or beaks.

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2. Sketch a figure such as a bird or animal on the face of the block in a size that fits.
3. Sketch on the two sides of the block side views of the figure.
4. Clamp the block, then saw main chunks of unwanted wood from around the sketched block of wood.
5. Rasp areas too small to saw. Keep turning the form, working from all angles. Keep checking the original sketches as the form takes shape.
6. Rasp in different directions to find best cutting direction.
7. Sandpaper thoroughly to get a satin surface.
8. Apply the chosen finish.
9. Add dowels or brass bracing rods for legs, necks, or beaks.

Teaching Hints

Motivate by showing slides or examples of students' work, motion pictures on birds, and pictures. Point out how different birds look, how their legs bend, what kind of feet they have, their different body and head shapes, how the wings are attached to the body.

Discuss the structural and aesthetic properties of wood. Emphasize the importance of using the long grain for thin parts to avoid breakage.

Discuss the correct use of tools, emphasizing safety measures. Caution students that clamps and vises may leave bruise marks on wood if not carefully used. Remind the students that rasping will save hours of sanding, which is mainly for finishing the surface. Point out that the aesthetic qualities of wood surfaces may sometimes be impaired by use of high gloss finishes. Encourage students to help each other.

Evaluation

Continuous evaluation at every stage is essential for success in this project. Before starting to cut the wood, the design should be evaluated in terms of what the student can do with the materials, the tools, the time, and the particular block of wood. Evaluate at each stage—after the student has sawed off the large parts, when he is rasping, and when he is sanding for a finish. Evaluate finally to determine whether legs, feet, or a stand is needed.

This project usually extends over a period of several weeks. Through recognizing the beauty of simplicity of line and through the development of good craftsmanship the student will gain a sense of achievement and pride.

SALT DOUGH

Art activities should not be limited to the classroom. The teacher may introduce and motivate art processes and teach the skills that the child can use outside the school.

Of the many types of modeling material, one of the simplest and one which is ideal for home use is salt dough.

MATERIALS AND EQUIPMENT

Flour
Salt
Water
Food coloring
Felt pens, various colors
Acrylic spray
Cookie tin
Gadgets around home to make texture—popsicle sticks, kitchen utensils

Recipe: Mix 1 cup salt, 1 1/2 cups water, and desired food coloring. Add 4 cups flour. Knead mixture until pliable.

Process

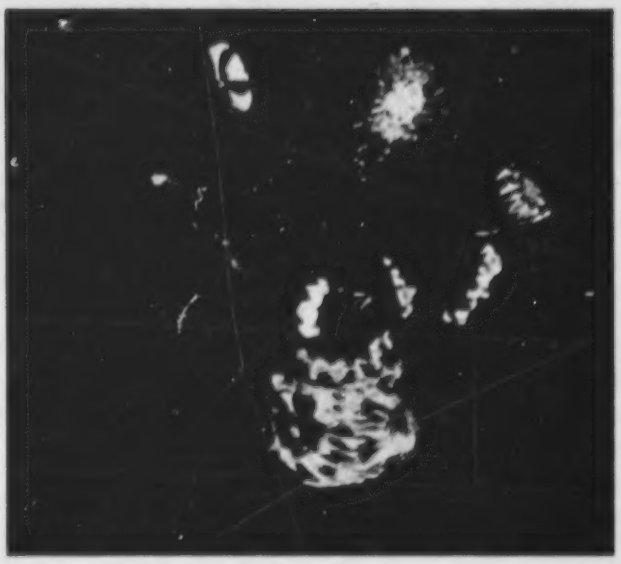
1. Discuss projects which might be applicable to salt dough modeling.

2. Demonstrate how several objects can be kneaded to be combined in a composite form. The young child may find it easier to make individual pieces—simple objects such as fruit—and group them together after they have been painted. The older child, after experimentation with modeling individual objects, will find more challenge in making a composition by kneading many small parts together to make a whole.

3. After children have produced their models, bake them in the oven at 275° F. for 2 or 3 hours depending on the thickness of the modeled objects. Remove objects when they are thoroughly hard and dry.

4. Decorate with colored felt pens.

5. Spray thoroughly—front, back, and sides—with acrylic spray. Spray should be used in open air by teacher, not pupils.



Teaching Hints

Because salt absorbs moisture from the air, if the modeled object is left unsealed, it will soon crumble. Watercolor or poster paint may be used to decorate. However, too much water will dissolve the salt in the modeled object. The older child can use watercolor glaze with liquitex to gain a professional finish. All glaze applications should be supervised by the teacher. When working on a large, detailed object such as a "tree of life," work directly on a cookie tin so the object need not be moved from the working surface to a utensil for placing in the oven. Kneading or welding one piece to another must be done carefully or they will separate when baked.

Evaluation

The sense of expression of feeling through the fingers when modeling with salt dough is highly satisfying for children. The two senses—seeing and feeling—are working simultaneously in this process. Through modeling, tactile sensitivity as well as visual awareness is developed.

PAPER LAMINATI

Paper laminating is a process of applying strips of paper dipped in wet paste to a framework, such as newspaper coils, boxes, chicken-wire screening, bottles, light bulbs, balloons, to create forms such as animals, musical instruments, totem poles.

MATERIALS AND EQUIPMENT

Newspaper, paper towels, decorative paper
Paste — starch, flour, wheat
Balloons, bottles, light bulbs, cans, boxes, newspaper coils for framework
String, rubber bands, tape
Wire — soft steel, coat hangers
Tempera paint
Decorative materials — beads, buttons, fur scraps, feathers
Scissors
Brushes — 3/4" easel, flat bristle, long handle; small, round-tipped watercolor

Paper Strip Method

1. Tear strips of newspaper or paper toweling 1 inch or so in width. Size of strips depends on size of form to be made.
2. Mix paste to a cream-like consistency.
3. Pour paste into shallow pan.
4. Dip the strips in the paste mixture one at a time.
5. Apply to framework, overlapping the edges and smoothing with fingers to blend edges.
6. Use as many layers as needed, usually about 3 or 4. Last layer should be made of paper towel strips.
7. Appendages such as animal ears may be added by cutting bogus paper or newspaper to the desired shape and gluing on with paper strips.
8. Allow to dry thoroughly.
9. Decorate when dry.

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Newspaper Coils Framework

1. Roll up newspaper and run a piece of wire through the middle of roll. The wire should extend the width of the roll.
2. Put rubber bands or tape around ends of each roll. Make 4 rolls.
3. Make framework for an animal structure with the coils.
4. Crumble newspaper and fasten to framework for shape of animal.
5. Cover the animal form with pasted strips of newspaper and paper toweling, overlapping the edges and smoothing together.
6. After 2 or 3 layers of paper strips have been applied, allow to dry.
7. Decorate when dry.

Variations in Making Framework

Balloons—Build a "shell" by covering a blown-up balloon with four layers of paper strips. When this is dry let out air slowly, then cut into the shell, add on to it, twist it, etc., to the desired shape using masking tape, staples, and paste to hold parts together. Bogus paper is excellent for the appendages, using cone forms or patterns. When this is finished, completely cover with one layer of pasted paper towel strips. When dry, form is ready to decorate.

Bottles—Choose an interesting shaped bottle. Apply several layers of strips of paper toweling. Attach appendages. For example, to make arms, use wire wrapped with papier mache toweling formed into a long full sleeve. Cut out hands and attach to bottom of sleeve. Decorate when dry.

Light Bulbs—These make interesting heads. Apply 4 or 5 layers of pasted paper strips over light bulb. Decorate with paint, yarn, buttons, raffia, paper, etc.

Cans—Make a hole in the bottom of a can and insert a long stick for a handle. Place beans or small pebbles in can for rattle. Apply 3 or 4 layers of pasted paper strips. Decorate when dry.

Boxes—Construct a form, such as an animal, from a combination of boxes and paper rolls. After taping them together to get desired shape, cover the box structure with pasted paper strips. Decorate when dry.

Totem Pole—Apply 8 layers of pasted paper strips over 8 blown-up balloons. Final layer should be paper towel strips. When dry, slice a 2-inch section off each bottom so that the forms can be piled on top of each other. Build a wide base from crushed newspaper and cover with pasted strips of paper. Build the forms into a column, attaching them with pasted strips of paper. Attach wings cut from tagboard to second form from top of totem pole. Paint each section a different design.

Masks—Masks may be built on various types of framework, including clay, chicken wire, wadded paper, and boxes. Model clay to shape of mask, coat with vaseline to prevent sticking, and apply pasted paper strips. When the mask is dry, remove it from the clay and decorate. Shape chicken wire to form a head and bend together end wires. Attach appendage, bending wires to hold them in place. Cover with large pasted paper strips, using smaller strips for final layer to get smooth finish.

Teaching Hints

Simplicity of line and shape in constructing the form and appropriateness of decoration should be stressed. The last layer of strips applied to a form should be paper toweling to provide a better painting surface. The pasted paper strips should overlap each other in building the structure. Torn edges should be blended and the surface smoothed with the fingers. Sizes of strips depend on the areas to be covered. Smaller strips are better for small corners and for obtaining a smooth final layer. For very fine details, tissue paper may be used.

While the construction of the form is important, designing and executing the decoration of the form should also receive attention. A hastily painted animal or mask can camouflage careful construction and a rather routinely-designed form can be enhanced by the addition of a good color design. Decoration may be done with materials such as yarns, bits of fur, buttons, and paint. For the older student, painting is an excellent lesson in design emphasizing line, dark and light, color, texture, and shape.

Evaluation

It may be desirable for the child to sketch with crayon or paint his idea before he begins on his three-dimensional form. Emphasis should be placed on construction and design using simple geometric forms or shapes. Continuous evaluation of form should be made throughout the process. Guiding the child to carefully appraise his form from all angles will help him develop ability to solve his own problems.

CLAY MODELING

Clay is a plastic, pliable material which can be easily modeled when wet. It can be kneaded, rolled, stretched, cut, joined, pinched, and pulled to form a multitude of shapes. Modeled shapes may be fired in a kiln to produce great hardness.

The more commonly used processes for working with clay in school are modeling from a lump (figure), pinching from a lump (pinch bowl), building with slabs (pots), building with coils (pots), throwing on a wheel (pots).

Children should have many opportunities to use clay, creating various sizes and types of objects, with constant encouragement to experiment and create.

Primary Grades

MATERIALS AND EQUIPMENT

Clay
Clayboards
Wire for cutting clay
Sponges
Plastic bag
Tools for texturing surface

Basic Process

1. Press lump of clay into desired shape by pinching or taking away clay.
2. When modeling figures, scoop out the inside b clay becomes too hard. No part of the figure s more than one inch thick.
3. Decorate by texturing, or the teacher may apply

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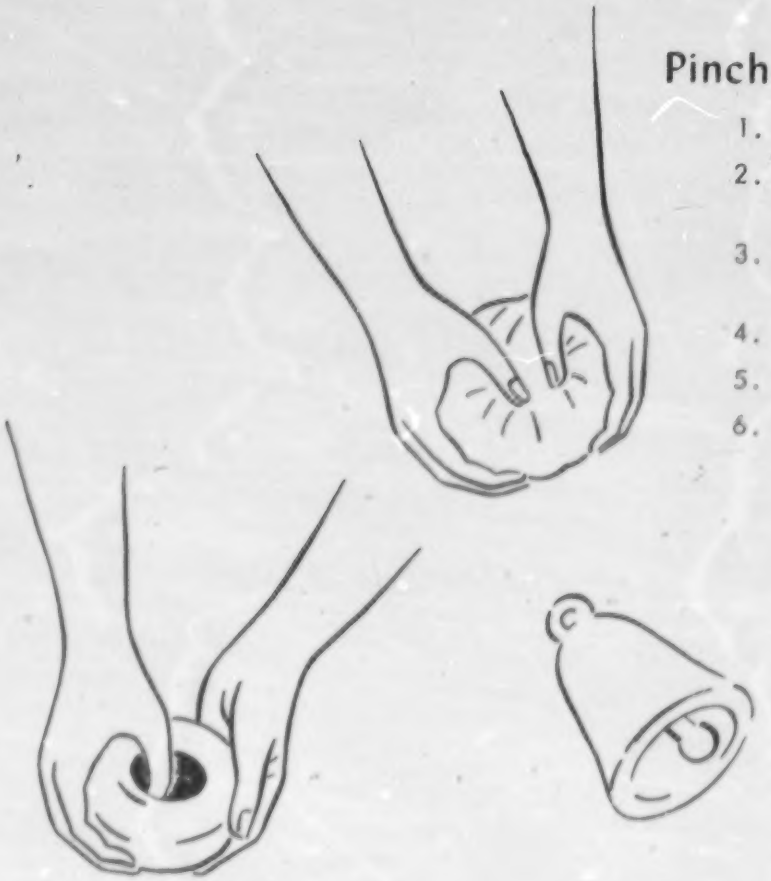
3. Decorate by texturing, or the teacher may apply glazes.



Pinch Pot Process

1. Roll lump of clay into ball between hands.
2. Holding ball between hands, press thumbs firmly center.
3. Using thumbs, carefully push clay away from center walls of even thickness.
4. Firmly push bottom of pot on table to make it flat.
5. Smooth sides with fingers.
6. Decorate by texturing, or the teacher may apply gl

Teaching Hints

Examine clay before using to make sure it is of proper consistency. Assemble the necessary tools. Have children's clothing protected with old shirts or aprons. Demonstrate the project. Cover finished pieces with a plastic bag so that clay dries gradually. Dry models thoroughly before firing.

Many projects may be finished with shoe polish and wax after firing. If a glaze is desired, the teacher should apply it, not the pupils. Mat finish is usually desirable.

Pinch Pot Process

1. Roll lump of clay into ball between hands.
2. Holding ball between hands, press thumbs firmly into center.
3. Using thumbs, carefully push clay away from center making walls of even thickness.
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Intermediate and Upper Grades

MATERIALS AND EQUIPMENT

- Clay
- Slip (clay mixed with water to a heavy cream-like consistenc
- Clayboards covered with oilcloth, rough side up
- Roller, rolling pin
- 2 1/4-inch thick guide sticks, 1 by 14 inches
- Sponge
- Newspaper and string
- Wooden frame for figure, such as a dowel or sticks 9 to 14 inc long attached to a base of 3- x 6-inch board 1-inch thi
- Wire for cutting clay
- Wood paddle
- Small turntable or plaster bat
- Tongue depressors
- Plastic bag
- Tools for texturing surface—spoon, stick, table knife
- Under glazes—pigment and clay base (no shine)
- Glazes (Caution: Close individual supervision by the teacher recommended when pupils apply glazes)

Figure Modeling

1. Plan and sketch a figure, such as an owl.
2. Build a wooden frame.
3. Wrap upright stick of wooden frame with newspaper a paper towels to shape of figure and tie paper loosely t wooden frame.
4. Roll out slab of clay using 1/4 inch thick guide sticks either side of slab to insure uniform thickness.
5. Wrap clay around paper covered stick.
6. Weld clay, adhering two pieces together by roughing surface and adding slip, then pressing parts together firmly with fingers.
7. Using this form as a base, add head and other appendage Wrapping clay around newspaper is an excellent technic for making heavy appendages like a head.
8. Smooth figures with sponge, or texture with carving tools.
9. Remove clay figure from stick after 2 or 3 days when is leather-hard (stiff enough to hold shape but not dry).
10. Decorate.

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10. Decorate.

Teaching Hints

Demonstrate to small groups in class so that all can see readily and have an opportunity to ask questions. Study, show, and discuss parts and postures of animals and people. Discuss parts of the whole figure, such as hands, wings, heads. Discuss firing process and explain why no part of figure should be more than one-inch thick. The hollow within the figure or parts of it may be made with wadded newspaper, which will burn out when the piece is fired. Finish skin areas with colored floor wax or shoe polish.

Coil-Slab Pot—Process

1. Sketch shape of pot to serve as a guide. Because of plasticity of clay, the original shape may change as the student works with the clay.
2. Roll out a slab of clay using the 1/4-inch thick guide sticks on either side of slab to insure even thickness.
3. Cut a 3-inch diameter circle from the slab of clay for the base of the pot.
4. From the remainder of the slab cut strips (coil slabs) about 4 inches long.
5. Build pot by welding the flat strips of clay to the circular clay base; then weld additional strips on top of them. Add no more than 2 or 3 strips a day.
6. If the clay is not sufficiently moist to join easily, the strips may be scored (scratched) at the ends to be joined and moistened with slip. Use a tongue depressor to help weld the clay pieces together.
7. Cover unfinished pot with plastic bag when stored between work sessions to keep clay from hardening.
8. When pot is completely built, beat it with a wooden paddle while turning it on a turntable to create smoothness and shape.
9. Smooth surface of pot with wet sponge and apply glazes (under close supervision).
10. Allow pot to dry slowly in plastic bag 4 to 5 days before firing.

Teaching Hints

To make a coil-slab that will increase or decrease the shape of the pot, lay the coil in an arc and strike it with the side of the hand to curve the slab. Tongue depressors may be used for welding and shaping (fingers tend to pinch the clay too thin). Be careful not to make the mouth of the pot too wide, as such shapes tend to collapse.

Evaluation

Because of the plasticity of clay and the way it is worked, every object modeled b the child will represent a succession of "new beginnings." Problems must be solved a choices taken each time a new beginning is made. The teacher helps the child as h adventures into the many new fields of creation open to him using clay.

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BASKET WEAVING

Basket weaving is one of the most ancient handicrafts. The process of weaving, of working out an individual design, and of shaping the basket challenges creativity in children as it did in our ancestors. This opportunity to express themselves in the same medium used by many of the peoples they are studying gives children a better understanding and appreciation of the past.

MATERIALS AND EQUIPMENT

- Reed, #2
- Raffia, all colors
- Tapestry needles, #18 blunt
- Shellac
- Bucket

Basic Process

Making the bottom of the basket:

1. Soak the reed in bucket of water.
2. Thread needle with raffia.
3. When the reed is soft and pliable, cut one end in half double it under the reed. Wrap the doubled end to the of the reed with raffia and catch with threaded needle t the circle.
4. Wrap raffia over the reed three times, wrapping toward After the third wrap, stitch into the center of circle, usi needle to pull the raffia through.
5. After the center is completed, wrap the reed with raffia times and stitch up into the row just completed.
6. Continue process until desired size for bottom of bask achieved.

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3. When the reed is soft and pliable, cut one end in half and double it under the reed. Wrap the doubled end to the stalk of the reed with raffia and catch with threaded needle to start the circle.
4. Wrap raffia over the reed three times, wrapping toward self. After the third wrap, stitch into the center of circle, using the needle to pull the raffia through.
5. After the center is completed, wrap the reed with raffia three times and stitch up into the row just completed.
6. Continue process until desired size for bottom of basket is achieved.

Making sides of basket:

7. To make reed turn up for sides of basket, place reed on top of last finished stitched reed of bottom. Continue the same process as was used in making bottom (wrap three times, stitch once).
8. Spray finished baskets with shellac to preserve them.

Teaching Hints

Position of holding the basket with the left hand and weaving with the right hand is demonstrated to the class. Individual help is given until each child can master the process. After some students have learned the process, they can help others. For the younger child, the teacher may wish to start building the center of the basket until it becomes about the size of a quarter.

Natural and brown baskets are more authentic when correlating this craft with Indian basket weaving. Excellent motivation is a trip to a museum to see Indian baskets. Natural materials such as pine needles and grasses may be used to provide additional motivation for creative basketry.

Evaluation

The craftsmanship is very important in this project as the baskets should be sturdy as well as of good design. Children may need adequate time for practicing the basic techniques before they proceed to the weaving of a complete basket.

Basket weaving is an excellent craft for eye-hand coordination. Boys as well as girls take pride in their individual work and creative designs.

WEAVING

Weaving, even of the simplest type, provides an opportunity to learn about design as well as to develop manipulative techniques. Using various materials, the weaver may utilize elements of color, value, texture, and pattern to create artistic designs.

Basically, weaving consists of threading strips of material such as yarn, string, cloth, paper (called the "weft") over and under, and back and forth through other strips of material laid out in parallel rows and held firmly at one or both ends (called the "warp").

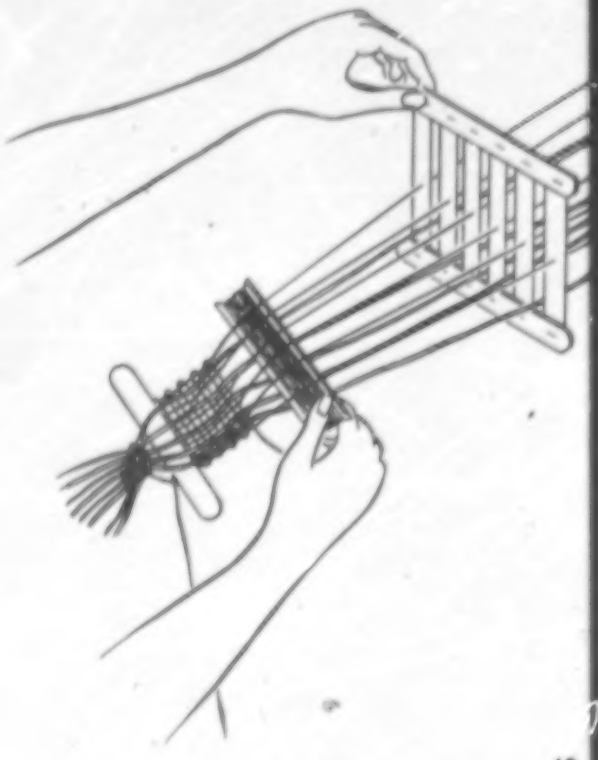
Primary Grades

Young children can begin the weaving process and learn some simple weaving techniques by weaving with paper.

MATERIALS AND EQUIPMENT	Construction paper— 12" x 18"	Ruler
	Paper, colored	Pencil
	Scissors	Paste

Paper Weaving

1. Fold the sheet of construction paper in half so the 12 inch ends meet.
2. Opposite the fold, mark a margin line about one inch from the end.
3. Starting at the fold cut to the margin line. Continue with parallel cuts about one inch apart.
4. Unfold the construction paper; the even cuts held together at the margin form the warp.
5. Cut strips of colored paper one inch wide by 12 inches long. These will be the weft.
6. Take a colored strip and weave "over and under" the cuts at one end of the construction paper. Next to it weave another strip "under and over." Repeat the alternating process until the warp is filled in with colored paper strips.



Other Suggestions

Loom made from tongue depressors or ice cream sticks.

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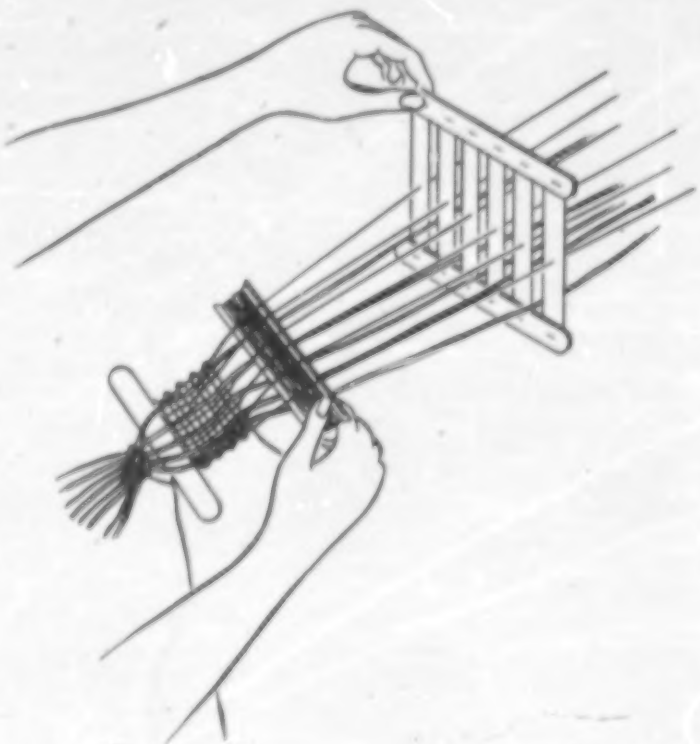

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Intermediate and Upper Grades

MATERIALS AND EQUIPMENT

Looms, wood frame or commercial frame
Yarns or threads for warp
Yarns and threads or other materials such as grasses, metallic ribbons, plastic for weft
Shuttles
Large eye needles (blunt point)
Tongue depressors

Process

Warping the Loom (Wooden frame table loom)

1. Tie end of warp thread to first nail.
2. Bring thread to opposite end and around first two nails there.
3. Go back and forth to opposite ends looping around 2 nails each time.
4. Tie end of warp thread to last nail.

Weaving

1. Thread large blunt needle (or tongue depressor with hole drilled in one end) with long strand of yarn, or use a wrapped shuttle.
2. Leave tail of yarn at beginning to tuck under later. Weave yarn over and under warp and back and forth across loom, pushing strands firmly to top of warp. (A ruler may be used to separate every other strand of warp. Leave weaving loose enough so as not to pull in edges of the warp.)
3. When weaving is completed, weave beginning and end tails of yarn into woven material to anchor firmly.
4. Remove the woven fabric from loom by lifting it off the nails of the frame.

Variations

On light-colored warp threads a design may be painted before weaving is done.

1. Place cardboard under warp threads.
2. Paint design on warp threads with water base textile paint or india ink using stiff brushes.
3. Weave with same light threads.

Teaching Hints

Floor and table frames give children a real insight into and appreciation for the weaving process. However, due to lack of classroom space, it is not always possible to have the desired number of looms. Tongue depressor looms may be easily attached to a hook on a wall and just as easily detached and rolled up to be stored away in a box in the pupil's desk. This allows him the opportunity to work on his weaving in his own time rather than only in an assigned art period.

Evaluation

This project extends over a period of time. Children will need help at various stages in both technique and appropriateness of design elements. However, they will ultimately realize a great sense of satisfaction and pride in their accomplishment. They will extend their appreciation to products of everyday living which are the result of weaving and similar processes.

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